24.961   PS-1   Northern German

1. Formulate a rule to account for the alternation between the uvular trill R [+consonantal, +dorsal, -high, -low, +back] and the unround back vowel [ɐ] [-consonantal, -high, -low, +back, -round]

Türen	[ty:Rən]	Tür	[ty:ɐ]	door, pl/sg
Meere	[me:Rə]	Meer	[me:ɐ]	sea, pl/sg
Ohren	[o:Rən]	Ohr	[o:ɐ]	ear, pl/sg.
hören	[hø:Rən]	hört	[hø:ɐt]	hear, inf/3sg
irren	[ɪRən]	irrt	[ɪɐt]	err, inf/3sg

2. The dorsal fricatives [x] [+back] and ç [-back] are in complementary distribution. State the contexts in which each sound occurs. Which sound occurs in the wider range of contexts? What rule(s) derive the surface phonetic representations?

Licht	[lɪçt]	'light'	Bucht	[bʊxt]	'bay'
Nächte	[nɛçtə]	'nights'	Nacht	[nɑxt]	'night'
Bücher	[by:çɐ]	'books'	Buch	[bu:x]	'book'
möchte	[mœçtə]	'wants to'	mochte	[mɔxtə]	'wanted to'
Eiche	[ɑɪçə]	'oak'	Baux	[bɑʊx]	'stomach'

[ç]emie	'chemistry'	*[x]emie (* = ungrammatical)
[ç]arisma	'charisma'	*[x]arisma
sol[ç]	'such'	*sol[x]
man[ç]e	'some'	*man[x]e
dur[ç]	'through'	*dur[x]

3. Assuming the rules so far, how can the following data be accounted for?

fürchten	[fyɐçtən]	'to fear'	*[fyɐxtən]
durch	[dʊɐç]	'through'	*[dʊɐx]
Lerche	[lɛɐçə]	'lark'	*[lɛɐxə]
Kirche	[kɪɐçə]	'church'	*[kɪɐxə]

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